

**In the Substitute Specification:**

**Please replace paragraph [0015] on page 4 of the substitute specification and abstract with the following new paragraph [0015].**

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B1 [0015] The base region 13 comprises either a diffusion region formed by thermal diffusion at a prescribed diffusion depth or a semiconductor layer formed on the surface of the layer 11 by vapor deposition and having a uniform ~~distribution of~~ impurity concentration in the vertical (i.e., width) direction of the layer. The thickness of the base region 13 is approximately 1.0  $\mu\text{m}$ . The groove 15 is formed by etching into the base region 13 and has a width of approximately 0.5  $\mu\text{m}$  and a depth from the top surface of the base region 13 of about 0.7  $\mu\text{m}$ . The p-type base region 13 is exposed at the bottom of the groove 15. The emitter region 14 is formed at the bottom surface of the groove 15 at a diffusion depth of approximately 0.1  $\mu\text{m}$ .

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